

centipoise, the foam or froth being of a type that breaks down fairly quickly such that the coated web has enough permeability to permit drying air to penetrate the coated web and applying said foam at a rate to produce a dry mat having a coating on one face and having a permeability of at least about 338 CFM/sq. ft.

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2 ~~17~~. (Amended) A permeable, foam coated, fibrous, nonwoven mat made by the process described in claim ~~16~~ wherein an aqueous binder is first applied to the wet, partially dewatered web and the wet, bindered web is passed over a suction box to reduce the binder content to a desired level prior to applying the foam or froth onto the top surface of the wet web.

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3 ~~18~~. (Amended) A permeable, foam coated, fibrous, nonwoven mat made by the process described in claim ~~17~~ wherein at least the majority are glass fibers and said foam is applied at a rate to produce a dry mat having a permeability of at least about 350 CFM/sq.ft.

8 ~~19~~. (Amended) A permeable, foam coated, fibrous, nonwoven mat made by the process described in claim 16 wherein said foam is applied at a rate to produce a dry mat having a permeability of at least about 500 CFM/sq.ft.

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9 ~~20~~. (Amended) A permeable, foam coated, fibrous, nonwoven mat made by the process described in claim ~~18~~ wherein said foam has a blow ratio between about 15 and about 30.

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10 ~~21~~. (Amended) A permeable, foam coated, fibrous, nonwoven mat made by the process described in claim ~~16~~ wherein the amount of liquid formed in the bottom of the Imhoff cone is less than about 2 millimeters.

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4 ~~22~~. (Amended) A permeable, foam coated, fibrous, nonwoven mat made by the process described in claim ~~18~~ wherein the amount of liquid formed in the bottom of the Imhoff cone is less than about 2 millimeters.

11 ~~23~~. (Amended) A laminate comprising a first material layer bonded to a second layer of a nonwoven fibrous mat, the mat having an exposed foam coating and made by the process described in claim ~~16~~.

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~~24~~. (Amended) A laminate comprising a first material layer bonded to a second layer of a nonwoven fibrous mat, the mat having an exposed foam coating and made by the process described in claim ~~17~~.

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~~41~~. (Amended) A permeable, foam coated, fibrous, nonwoven mat made by the process comprising making a permeable fibrous mat on a wet process mat machine in which an aqueous slurry containing fibers is continuously deposited onto the top surface of a moving permeable forming belt, partially dewatered, followed by applying an excess of an aqueous binder, removing excess aqueous binder to form a wet, bindered web and drying the wet, bindered web to produce a dry non-woven fibrous mat, the improvement comprising applying a foam or froth onto the wet, bindered web after said web, the foam or froth having a blow ratio of at least about 12, the foam forming less than 5 millimeters of liquid in the bottom of an Imhoff cone after 16 hours from filling and a viscosity of at least about 200 centipoise, the foam or froth being of a type that breaks down fairly quickly such that the coated web has enough permeability to permit drying air to penetrate the coated web and applying said foam at a rate to produce a dry, mat having a coating on one face, the mat having a permeability of at least about 338 CFM/sq. ft.

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~~42~~. (Amended) A permeable, foam coated, fibrous nonwoven mat made by the process described in claim 41 and wherein at least the majority of fibers are glass fibers.

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~~43~~. (Amended) A permeable, foam coated, fibrous, nonwoven mat made by the process described in claim ~~42~~ and wherein said foam is applied at a rate to produce a dry mat permeability of at least about 350 CFM/sq.ft.

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~~44~~. (Amended) A permeable, foam coated, fibrous, nonwoven mat made by the process described in claim ~~42~~ and wherein said foam is applied at a rate to produce a dry mat having a permeability of at least about 500 CFM/sq.ft.

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~~45~~. (Amended) A permeable, foam coated, fibrous, nonwoven mat made by the process described in claim ~~41~~ wherein the foam has a blow ratio of at least about 25.

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~~46~~. (Amended) A permeable, foam coated, fibrous, nonwoven mat made by the process described in claim ~~42~~ wherein the amount of liquid formed in the bottom of an Imhoff cone filled with foam and allowed to age is less than about 2 millimeters.

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~~47.~~ (Amended) A permeable, foam coated, fibrous, nonwoven mat made by the process described in claim ~~42~~ wherein the foam has a blow ratio of at least about 25.

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~~48.~~ (Amended) A laminate comprising a first layer of material bonded to a second layer of a nonwoven fibrous mat, the mat having an exposed foam coating and made by the process comprising making a permeable fibrous mat on a wet process mat machine in which an aqueous slurry containing fibers is continuously deposited onto the top surface of a moving permeable forming belt, partially dewatered, followed by applying an excess of aqueous binder, removing excess aqueous binder to form a wet, bindered web and drying the wet, bindered web to produce a dry non-woven fibrous mat, the improvement comprising applying a foam or froth onto the wet, bindered web after said web, the foam or froth having a blow ratio of at least about 12, the foam forming less than 5 millimeters of liquid in the bottom of an Imhoff cone after 16 hours from filling and a viscosity of at least about 200 centipoise, the foam or froth being of a type that breaks down fairly quickly such that the coated web has enough permeability to permit drying air to penetrate the coated web and applying said foam at a rate to produce a dry, mat having a coating on one face, the mat having a permeability of at least about 338 CFM/sq. ft.

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~~49.~~ (Amended) A laminate comprising a first layer of material bonded to a second layer of a nonwoven fibrous mat, the mat having an exposed foam coating and made by the process described in claim ~~48~~ and wherein at least the majority of fibers are glass fibers and said foam is applied at a rate to produce a dry mat having a permeability of at least about 350 CFM/sq.ft.

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REMARKS

Claims 16-26 and 41-51 remain in the application. Claims 1-15, 27-40 and 52-56 stand withdrawn and have been cancelled without any meaning that applicant has abandoned the pursuit of obtaining a patent on the invention covered by these claims.

The remaining claims have been amended to address the objection that the claims depend from non-elected claims. The presently claimed invention is a wet laid non-woven mat made using a known wet process modified in an inventive way by applying a froth or foam to either a wet, partially dewatered fibrous web or to a wet, partially dewatered aqueous bindered web, on the same machine used to form and apply binder to the mat,

22 A permeable, foam coated, fibrous, nonwoven mat made by the process described in claim 15.

23 A laminate comprising a first material layer bonded to a second layer of a nonwoven fibrous mat, the mat having an exposed foam coating and made by the process described in claim 1.

24 A laminate comprising a first material layer bonded to a second layer of a nonwoven fibrous mat, the mat having an exposed foam coating and made by the process described in claim 2.

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6~~25~~ The laminate of claim ~~24~~ wherein the first layer is gypsum board.

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7~~26~~ The laminate of claim ~~24~~ wherein the first layer is a light-weight insulating material.

27. In a method of making a permeable fibrous mat on a wet process mat machine in which an aqueous slurry containing fibers is continuously deposited onto the top surface of a moving permeable forming belt, partially dewatered, followed by applying an excess of aqueous binder, removing excess aqueous binder to form a wet, bindered web and drying the wet, bindered web to produce a dry non-woven fibrous mat, the improvement comprising applying a foam or froth onto the wet, bindered web after said web, the foam or froth having a high percentage of air having a blow ratio of at least about 12, the foam forming less than 5 millimeters of liquid in the bottom of an Imhoff cone after 16 hours from filling and a viscosity of at least about 200 centipoise, and applying said foam at a rate to produce a dry, mat having a coating on one face, the mat having a permeability of at least about 150 CFM/sq. ft.

44. A permeable, foam coated, fibrous, nonwoven mat made by the process described in claim 30.

45. A permeable, foam coated, fibrous, nonwoven mat made by the process described in claim 31.

46. A permeable, foam coated, fibrous, nonwoven mat made by the process described in claim 40.

47. A permeable, foam coated, fibrous, nonwoven mat made by the process described in claim 32.

48. A laminate comprising a first material layer bonded to a second layer of a nonwoven fibrous mat, the mat having an exposed foam coating and made by the process described in claim 27.

49. A laminate comprising a first material layer bonded to a second layer of a nonwoven fibrous mat, the mat having an exposed foam coating and made by the process described in claim 28.

21 / 50. The laminate of claim 49 wherein the first layer is gypsum board.

22 / 51. The laminate of claim 49 wherein the first layer is a light-weight insulating material.